

two days before he would touch any meat, I tried him first with raw meat, but nothing would tempt him. Two days later, however, he quite definitely ate the half-cooked meat which this time I had put in his box all in one piece, about one inch long and a quarter inch broad. Though this time I did not observe the beetle actually eating, the meat's surface clearly showed marks all over it of having been well bitten.

Having once more proved to myself that these beetles will eat meat, at least in captivity, I released *Basilianus neelgherriensis* back into the garden.

I should be very grateful for any remarks these notes of mine may produce from others, and would like to know what is this beetle's natural food. I now know they are wood-boring, so suppose they do a certain amount of harm; but perhaps there is some good they also do.

c/o MISS HEATH,
LOVEDALE P.O.,
NILGIRIS,
September 3, 1956.

(MISS) M. E. WOLFE MURRAY

29. *TARACHE NITIDULA* F., A SEMILOOPER PEST ON COTTON IN SOUTH INDIA

(With a plate)

INTRODUCTION

Cotton is one of the important cash crops grown extensively in South India. Like any other crop it is also subject to the attack of a number of pests. Among them three semiloopers figure prominently, namely, *Cosmophila indica* G., *Acontia graellsii* F., and *Tarache nitidula* F. Of the three loopers, in some years *Tarache nitidula* F. assumes the status of a major pest defoliating the leaves. It has a wide distribution throughout the plains of Southern India. Fletcher (1914) has recorded the occurrence of this pest on *Calotropis gigantea* besides cotton. Hussain (1925) has reported it on Punjab Cotton with another species of *Tarache* namely, *notabilis*, during the months of May and August. Taylor and Chopra (1921) have classified it as a major pest of cotton in the Transvaal and the Punjab, effectively controlled by light traps. Lesne (1931) also is of opinion that it is a major pest of cotton. Ramakrishna Iyer (1940) reckons this insect as a sporadic local pest appearing now and then on cotton doing extensive damage.

A severe infestation was noted in the Central Farm, Agricultural College, Coimbatore during 1955 which gave an opportunity to pursue the life-history of the pest as very little is known on its bionomic and control aspects. The following is a short account of the observations made on this pest at Coimbatore.

The Moth: (Fig. 4).

Hampson (1910) has given the following description:

'Head and thorax silvery white; palpi above, antennae, forelegs and the tarsi brownish; abdomen white. Fore-wings silvery white; an oblique quadrate olive-brown patch from costa near base to median nervure and a triangular patch on middle of costa; the terminal area broadly olive-brown shading to purple-grey with the indistinct dark curved post-medial line near its inner edge commencing in the white sub-terminal line with very short streaks on the veins from it to a fine white line just before termen enclosing a series of spots the spot above tornus being blackish; cilia white tinged with brown at tips. Hind-wing white, the veins of terminal area tinged with brown the termen suffused with brown, narrowing to tornus or confined to apical area; cilia white with a brown line through them towards apex.'

Life History:

The moths copulate after a day of emergence, and the female lays 30 to 40 eggs singly on the surface of the leaves. The eggs hatch out in the course of three days. The caterpillars are very active and move on the plant in a looping manner. They feed on the tender leaves biting the edges of the leaflets. There are four moults during the larval stage. The caterpillar feeds voraciously and becomes full grown in 20 to 22 days. The full-grown caterpillar undergoes a drastic contraction in size just before pupation. It pupates in the soil without any elaborate cocoon formation. The pupal period varies from 12 to 15 days. Thus, the whole life-cycle from egg to adult takes 33 to 37 days.

Egg:

The egg is circular in shape, greenish in colour and measures 0.577 mm. (Fig. 1b). The egg period varies from 3 to 4 days.

Larva: 1st Stage: (2a)

Newly hatched larva about 2 mm. long, with prominent head, brownish black in colour; body slender and blackish; the intersegmental area blackish white. Prolegs confined to 5th, 6th and 10th segments of the abdomen, the anterior ones being inconspicuous. The larva moves actively in a looping fashion.

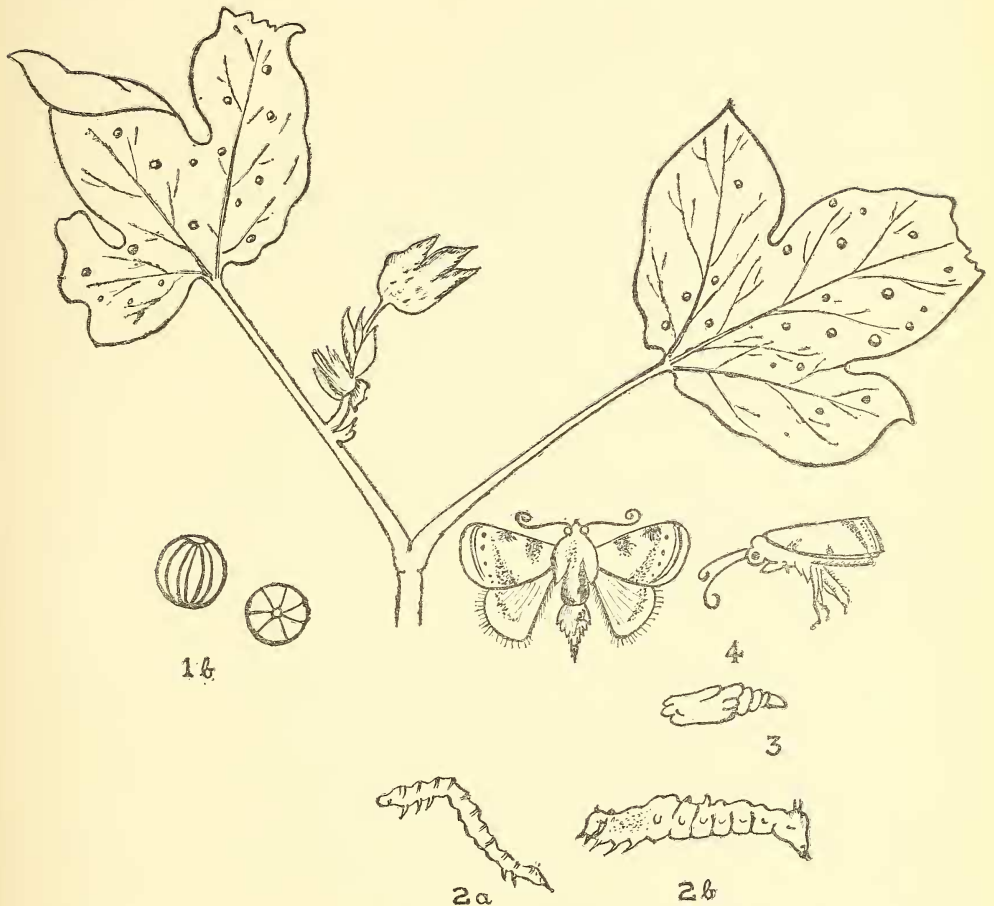
2nd Stage:

Length about 6 mm. Body orange coloured with a number of white spots; second and third thoracic segments with a smoky black patch on the dorsal side and the last anal segment with two distinct white spots. Each segment provided with four black tubercles; the anal segment raised in the form of a hump and provided with 2 orange-coloured tubercles on the summit. Paired prolegs three in number, and orange coloured with black crochets; thoracic legs whitish yellow in colour.

3rd Stage:

Length about 1.6 cm. Body including head, thorax, abdomen and prolegs chocolate brown with number of black and white spots, some of the black spots on the thoracic and abdominal region being located on raised tubercles; hairs on tubercles black; two whitish patches seen prominently abutting the dorso-median line on the third

LIFE HISTORY STAGES OF
TARACHE NITIDULA F. ON COTTON



EXPLANATION TO THE PLATE.

- 1 & EGG MAGNIFIED
- 2 a YOUNG CATERPILLAR
- 2 b FULL GROWN CATERPILLAR
- 3 PUPA
- 4 ADULT

